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ECONOMIC CONDITIONS AND THE BIRTH-RATE  
AFTER THE WAR

I

It is a well-known fact that a war of any great intensity or duration checks both the marriage-rate and the birth-rate, and that after the close of hostilities and the demobilization of troops comes a year or two of recovery and sometimes of extreme rebound in marriages and births. This fact has been evidenced by practically every important war since the beginning of the publication of reliable vital statistics. War temporarily checks marriage and reproduction, war kills off its thousands or millions of men, but experience shows that in the past, with the possible exception of the extremely destructive Thirty Years' War, these ravages in the population have been quickly made good.

No vital statistics are as yet available for the years 1914 and after, and there will probably be a long delay before the warring countries publish their registration returns for the war years. Considerations of state may, indeed, make some of them loath to publish the full, true returns at all. The enormous losses of the war will of course produce increases in death-rates hitherto unexampled even in war time. That there is a correspondingly large decrease in marriages and births cannot be doubted, but none of these vital phenomena as influenced by the present war are yet amenable to

quantitative analysis, at least outside the strongly censored registration bureaus of the individual countries. Where war produces a profound depressive effect upon marriage- and birth-rates, the post-bellum reaction seems usually to be correspondingly pronounced. Will the reaction after the present war be in proportion to the magnitude and destructiveness of the unprecedented conflict? What, indeed, will happen to the birth-rate after the war? Speculation is perhaps idle, and prophecy, however guarded, is likely to be far beside the mark; yet such large issues, political and economic, hinge upon the psychological mood of the people after the war and upon economic and social conditions as reflected in the will—or blind instinct—to mate and multiply, that no apology is necessary for an attempt to analyze roughly the probabilities.

We may first set forth briefly the facts as to the influence of the chief wars during the past fifty or sixty years. Remembering that no war in the last hundred years, with the possible exception of the Napoleonic wars, the influence of which we cannot statistically analyze, has taxed the vital and economic resources of the warring countries to anything like the point of exhaustion to which the present war will bring Europe, we may examine the probable post-bellum economic and psychological conditions in their influence on marriage and births—on the rapidity of the vital recovery of exhausted peoples.

Beginning with the Crimean War, 1854-55, there have been eleven wars worth noting in the last three-quarters of a century. Following the Crimean War came the Austro-Italian War of 1859, the aggression of Austria and Prussia against Denmark in 1864, the brief and decisive war which Bismarck engineered against Austria in 1866, the Franco-Prussian War, 1870-71, the Russo-Turkish War of 1877-78, the Boer War, 1899-1902, the Russo-Japanese War, 1904-5, the Balkan Wars, the first one lasting from October to December, 1912, the second from March to July, 1913, and finally in America our own Civil War and the Spanish-American War. This last, however, was so insignificant in proportion to the resources of the United States that, even had we the necessary vital statistics, no appreciable influence would probably be noted. Data are lacking also for the Russo-Turkish War of 1877-78.

*The Crimean War, 1854-55.*—Of the powers involved in the Crimean War, France and England are the only ones for which marriage and birth data are available. In neither country was there any appreciable or certain effect on marriage- or birth-rates, either during the war or afterward. The relatively small number of men engaged, in proportion to population, the short duration of the conflict, and the fact that it was fought on distant shores explain this absence of disturbing influence. What may have been the effect in Russia and Turkey, more intimately involved, and in Sardinia, which out of her small population sent one army corps, we cannot say.

*The Austro-Italian War, 1859.*—France, Austria, and Sardinia were the combatants. In France no effect was apparent. In Austria the marriage-rate fell from 17.3 in 1858 to 14.8 in 1859 and rebounded immediately to 17.5 in 1860. The Austrian birth-rate fell from 43.2 in 1859 to 40.6 in 1860, but, curiously enough, never recovered.

*The Danish War, 1864.*—This was a small affair, measured from the standpoint of the aggressors, Prussia and Austria, but not from that of Denmark. No effect is apparent in the German or Austrian statistics, but in Denmark the marriage-rate fell from 15.0 in 1863 to 11.3 in 1864, rising again to the abnormal figure 17.8 the year following. The influence on the birth-rate was slight.

*The Austro-Prussian War, 1866.*—Bavaria, Saxony, Nassau, Württemberg, Baden, and Hanover all fought with Austria against Prussia, but data are at hand for only the two chief contestants and Bavaria and Saxony. Marriage- and birth-rates for these countries are given in Table I. Taking first the marriage-rates, it is apparent that in Austria, Prussia, and Saxony the war produced a decided decline and that the close of hostilities brought an equally decided reaction.<sup>1</sup> In Bavaria the effect was less pronounced. The table of birth-rates shows a noteworthy decline in Prussia in the year after the war, where it would naturally come after so brief a conflict, and a progressive though very moderate decline in Austria in 1866 and 1867. The Austrian birth-rate recovers in 1869, but the

<sup>1</sup> The decline of the rates in Austria in 1866 was doubtless partly due to the cholera epidemic of that year.

Prussian rate does not reach the level of 1865 until after the Franco-Prussian War.

TABLE I  
MARRIAGE-RATES\*

	Austria	Prussia	Bavaria	Saxony	France
1860.....	17.5	16.8	13.8	18.0	15.8
1861.....	17.1	15.9	14.2	16.7	16.3
1862.....	18.0	16.8	15.0	17.4	16.2
1863.....	17.3	17.3	16.8	17.8	16.0
1864.....	16.7	17.2	16.7	20.0	15.8
1865.....	16.0	18.1	17.1	18.8	15.7
1866.....	13.5	15.5	16.8	15.8	16.0
1867.....	17.8	18.6	18.1	18.3	15.7
1868.....	18.5	17.6	15.8	19.6	15.7
1869.....	20.7	17.8	24.7	19.2	16.5
1870.....	19.4	14.7	17.8	16.7	12.1
1871.....	19.0	15.9	16.7	16.9	14.4
1872.....	18.4	20.7	21.4	20.2	19.5
1873.....	18.5	20.3	19.8	21.1	17.7
1874.....	17.9	19.4	18.4	20.2	16.6
1875.....	16.9	18.1	18.0	21.2	15.8

\*The rates for Austria, Prussia, and France are from the *Reports* of the Registrar General of England and Wales. Those for Bavaria and Saxony are from Caudelier, *Les Lois de la population en Belgique*, pp. 21, 25.

BIRTH-RATES\*

	Austria	Prussia	Bavaria	Saxony	France
1860.....	40.6	38.6	35.6	42.6	26.2
1861.....	40.0	37.5	34.9	41.0	26.9
1862.....	40.3	37.0	35.5	41.5	26.5
1863.....	39.9	39.3	37.3	43.2	26.9
1864.....	40.4	39.4	38.4	42.5	26.6
1865.....	39.1	39.1	38.1	42.8	26.5
1866.....	38.7	39.2	38.4	43.7	26.4
1867.....	37.4	36.9	38.9	40.7	26.4
1868.....	38.7	36.8	39.1	42.0	25.7
1869.....	40.2	37.7	39.7	42.4	25.7
1870.....	40.5	38.1	41.5	43.2	25.5
1871.....	39.8	33.8	37.8	39.4	22.6
1872.....	40.0	39.8	41.4	44.3	26.8
1873.....	40.9	39.6	42.5	45.3	26.1
1874.....	40.7	40.2	42.7	46.1	26.2
1875.....	40.9	40.8	43.2	45.7	26.0

\* The rates for Bavaria and Saxony are from Caudelier, *op. cit.*, pp. 24, 25.

*The Franco-Prussian War, 1870-71.*—The emphasized rates in the tables, for the war years and the years immediately preceding and following, reveal the powerful disturbing influence of the

greatest of modern European wars prior to 1914. Taking first again the marriage-rates, we find that the Prussian rate declined from 17.8 in 1869 to 14.7 in 1870—a fall of more than 17 per cent. The Bavarian rate fell from the exceedingly abnormal level of 24.7 in 1869 to 17.8 in 1870 and 16.7 in 1871; the Saxon rate, from 19.2 to 16.7; and the French, from 16.5 to 12.1—a decline of nearly 27 per cent. Thus the country which was hit the hardest by the war reflects that fact in its vital statistics. The recovery in the marriage-rate was immediate (1872) and complete in all the countries for which we have data. In fact, the close of the war seems to have marked the beginning of a prolonged period of high marriage-rates in the German countries.

Turning to the birth-rate, we find an equally noteworthy decline, coming, not in 1870, but, as we should expect (the war being short), in 1871. Prolific Prussia naturally suffers a greater decline (from 38.1 to 33.8) than more prudent France (25.5 to 22.6). The post-bellum rebound is pronounced in all the warring countries, and, like that in the marriage-rate, is of some duration in the German countries. The Prussian birth-rate did not again fall to the level of 1869 until 1880.

*The Boer War, October, 1899, to May, 1902.*—English marriage-and birth-rate statistics reflect no influence of this war.<sup>1</sup> It was a difficult struggle for England to bring to a close, but mainly because of its distance from England. It did not draw into the army a relatively large proportion of the male population.

*The Russo-Japanese War, 1904-5.*—Turning now to the Russo-Japanese War, which lasted from February, 1904, to August, 1905, we have Table II, showing again the familiar decline and recovery in marriages and births. In Russia the rebound of both the marriage-rate and the birth-rate was immediate and extreme. In Japan neither showed improvement until 1907.

*The Balkan Wars, 1912-13.*—In the first Balkan War, which lasted from October to December, 1912, were involved Bulgaria, Servia, Greece, Montenegro, and Turkey; in the second war, from

<sup>1</sup> Yet Havelock Ellis says: "At the present time English schools are sending out an unusually small number of pupils into life, and this is directly due to the South African war fifteen years ago" (*Essays in War-Time* [1917], p. 29).

March to July, 1913, Bulgaria, Servia, Greece, Turkey, and Roumania. There are no Turkish vital statistics, and recent data are lacking for the other countries except Roumania and Servia, and for these the data are not recent enough to show the post-bellum recovery.

TABLE II

	RUSSIA		JAPAN	
	Marriage-Rate	Birth-Rate	Marriage-Rate	Birth-Rate
1900.....	17.6	49.4	15.4	31.7
1901.....	17.2	47.9	16.6	32.7
1902.....	17.2	49.1	17.1	32.9
1903.....	17.8	48.1	15.9	32.0
1904.....	15.2	48.5	16.9	30.6
1905.....	15.6	44.8	14.7	30.6
1906.....	19.2	46.8	14.6	28.9
1907.....	17.6	46.6	17.7	33.0
1908.....	15.8	44.3	18.7	33.9
1909.....	15.8	44.0	17.6	34.2

Roumania was not in the first war, so the drop in the marriage-rate from 21.0 to 17.3 in 1912 must be attributed to other causes—possibly to mobilization of troops. In Servia the effect of war on the marriage-rate is most extreme—if the figures are to be trusted. Available data do not come down far enough to date to reveal the effect on the birth-rate.

TABLE III

	ROUMANIA		SERVIA	
	Marriage-Rate	Birth-Rate	Marriage-Rate	Birth-Rate
1908.....	18.2	40.3	18.4	36.8
1909.....	18.4	41.1	18.7	36.5
1910.....	18.5	39.2	20.5	38.5
1911.....	21.0	42.3	20.6	36.2
1912.....	17.3	43.4	8.8	38.0
1913.....	18.4	42.1	.....	.....

The foregoing rapid survey of the European wars of the past sixty-five years and of the Russo-Japanese War shows that the decline of the marriage-rate in war time and its recovery when hostilities cease are practically universal phenomena. This ebb

and flow fails to materialize only when the struggle is brief and insignificant in comparison to population. It is clear also that similar movements take place in the birth-rate, although with not the same promptitude or quite the same certainty.<sup>1</sup> In general, naturally, the larger and longer the war the more effect is produced upon the birth-rate.

It is not possible to trace with any accuracy or much certainty the influence of the American Civil War, although the experience of Europe shows what that influence must have been. The registration statistics of Massachusetts, however, give direct indication of the influence on birth-rates and marriage-rates, as Table IV shows.<sup>2</sup>

TABLE IV

	Marriage-Rate	Birth-Rate
1860.....	20.15	29.28
1861.....	17.72	28.63
1862.....	17.68	25.92
1863.....	17.36	24.20
1864.....	19.87	24.17
1865.....	20.60	23.87
1866.....	22.15	26.16
1867.....	.....	26.17

The writer has made an attempt to trace the influence of the Civil War on the proportion of children to women of child-bearing age, but without much success. The proportion of white children under ten years of age to total white population was only 0.2 per cent less in 1860 than in 1850, while it was 2.0 per cent less in 1870 than in 1860, and again only 0.5 per cent less in 1880 than in 1870.<sup>3</sup> This might be taken as certain indication that the decline in the proportion of children—a decline which, as Willcox has shown, began early in the century—was accelerated by the Civil War, were it not for the fact that equal or greater decline was registered in 1850 and 1890. The proportion of children under five years of age

<sup>1</sup> It is probable, however, that birth-rates by months would reveal the disturbing influence of war even where the annual rates do not.

<sup>2</sup> Baily, *Modern Social Conditions*, pp. 107, 141.

<sup>3</sup> U.S. *Census Bulletin* No. 22, 1905, "Proportion of Children in the United States," p. 17; also *Twelfth Census*, "Supplementary Analysis," p. 417.

in 1870 can throw only indirect light on the problem because most of them were born after the war was over. Nevertheless, in the South particularly we might expect the decline in the proportion of children under five years of age between 1860 and 1870 to be especially marked, because the total exhaustion of the South and the continued unsettling influence of Reconstruction would prevent the normal immediate recovery in marriages and births seen in Europe, for example, after the Franco-Prussian War. Table V shows the percentage of decline in the proportion of children under five years of age in the South for all decades, for purposes of comparison, from 1840 to 1900. The decrease in 1870 is large, but not so great as in 1850, and not appreciably greater than in 1890. The data are therefore inadequate to demonstrate the effect of the war in decreasing birth-rates.

TABLE V

PERCENTAGE INCREASE (+) OR DECREASE (-) IN THE PROPORTION OF WHITE CHILDREN UNDER FIVE YEARS OF AGE TO WHITE FEMALES FIFTEEN TO FORTY-NINE YEARS OF AGE, 1840-1900

	1900	1890	1880	1870	1860	1850	1840
Northern South Atlantic....	+2.2	-14.3	+3.0	-8.2	+1.1	-14.8	-1.5
Southern South Atlantic....	+1.7	-9.9	+16.5	-14.2	-4.2	-19.1	-2.4
Eastern South Central....	-9.0	-11.8	+5.1	-11.8	-4.7	-21.0	-6.0
Western South Central....	-2.9	-12.7	+16.7	-15.1	-2.6	-18.8	-2.5

TABLE VI

	Percentage Increase 1880	Percentage Decrease 1870
Virginia*.....	9.9	.....
North Carolina.....	17.3	11.8
South Carolina.....	21.7	11.3
Georgia.....	15.0	17.9
Florida.....	5.9	16.8
Louisiana.....	9.6	10.0
Arkansas.....	14.7	14.9
Texas.....	17.8	21.0

\* Change between 1860 and 1870 is not indicated because in the meantime West Virginia had been set off from Virginia.

A comparison of 1880 with 1870, however, shows that the normal decline in the proportion of children is turned into a positive and

significant advance. The figures for 1880 reveal the South in pronounced, though belated, recovery from the vital ravages of war and Reconstruction. Nowhere else in the country is there increase in the proportion of children in this decade except in the new states, Idaho, Wyoming, and Arizona. The corresponding data for individual southern states are even more indicative of the process of recovery. That there was an extraordinarily high reproductive rate in the South after Reconstruction, between 1875 and 1880, cannot be doubted.

## II

The causes of post-bellum increases in marriages and births are for the most part self-evident. War breaks up existing family relations, but, where death has not intervened, its termination restores them. Moreover, many marriages of men who have gone into the battle line and lived to tell the tale have been prevented or postponed by war, and at its close are consummated, so that marriage ceremonies which would have been spread over several years are crowded into a few months. Doubtless the joy of reunion contributes to this, as does also the fact that many widows are left economically destitute and are ready to marry almost any kind of man for the sake of a home. More subtly, it may also be that the reaction of peace times after the anarchy of war, the joy of return to civic pursuits and upbuilding home life, may create in a whole people, even in defeat, a will to live which results in a period of supernormal propagation.

So stupendous is the present conflict, however, so unprecedented, and so stimulative to the imagination, that we may well look forward to the breaking of precedents after it is over. Will the people return to the positive, constructive pursuits of life and to marriage and renewed multiplication, or will the catastrophe have been such a shock that the mechanism of the life of the masses will no longer work in the old ways? Will the women of Europe continue to breed food for nationalistic ambition, or will they institute something akin to a birth strike, such as the socialists of Germany some years ago tentatively suggested? It is possible that the psychological effect of the years of mass-murder may be stolid stagnation,

and that the people will return to the old unreasoning habits and passions. It may be, on the other hand, that the shock will have awakened the people to a thoughtfulness and self-restraint which will lead them at once to a conscious limitation of the birth-rate. A young American student who spent eighteen months in relief work between the German lines recently came back to his classes—"to acquire a new stock of illusions," as he put it. Will the war-sickened masses of Europe go back to the old illusions? There is no particular reason, in spite of the revolution, for supposing that the Russians will not—that the Russian birth-rate, always barbarously high, will not rebound to nearly its old level. But in the Western nations the outcome is problematical; there it will depend upon both economic and psychological factors. Economic conditions will probably still play the leading rôle. It is a demonstrated fact that both the marriage-rate and the birth-rate rise in periods of prosperity and fall during hard times, but after this war—unprecedented as its shock has been and must be—the psychological condition of the people will be a factor scarcely secondary to economic forces.

Leaving out of account, for the moment, the psychic temper of the people, the level of marriage-rates and birth-rates after the war will depend primarily upon economic conditions, and specifically upon the demand for labor and the level of net wages—that is, what is left to the laboring-class family after the tax-gatherer has had his due. The economic lot of the masses in any country depends fundamentally upon the demand for labor. With a strong demand for labor, wages are high, unemployment at a minimum, and the strength, vitality, and hopefulness of the people at a maximum. Conversely, with a weak demand for labor, wages are low, unemployment prevalent, and the state of mind of the masses one either of dissatisfied unrest or of sodden inertia.

Demand for labor comes ultimately from desire for consumable commodities and services, but desire alone does not constitute effective demand. There must be ability to pay. It is certain that both in Europe and in other countries there will be an immense need—a strong desire—for consumable and capital goods of all sorts, goods which Europe has habitually produced and can pro-

duce again as soon as normal conditions can be approached. Foreign countries, especially the United States, will have the ability to pay for European products; but in Europe itself a prolonged period of recovery will have to be gone through before anything like the buying power of ante-bellum years is again attained. One fact is certain: that industry, and demand for industrial labor, cannot be built up without a market—that is, without an effective demand for goods, and, in the last analysis, for consumers' goods. In so far as Europe can depend upon foreign demand, industrial rehabilitation will be relatively easy; and the importance of foreign markets to this end will undoubtedly cause European manufacturers to be keener competitors than ever before; but just to the extent that Europe has to depend on home markets will the task of rehabilitation be slow, difficult, and dangerous.

In the first place, the prices of all consumers' goods will be high for a considerable period—at least a year or two—after the war. Family incomes will be low, and taxes burdensome beyond imagination. The masses will perforce have to continue much the same retrenchment in expenditure that they have been compelled to make during the war. There may be, as indicated below, an increased demand for luxuries and for domestic and personal service, but for the great bulk of staple commodities, consumed by the working and middle classes, demand will be much curtailed, simply because the masses will not have the necessary net income to purchase goods as they did before the war. The most difficult step out of poverty is the first one—the securing of an initial purchasing power and effective demand for commodities on the part of the people. Given that, entrepreneurs will find a way to secure capital and to hire labor. Demand for commodities is a demand for labor, directly and indirectly, John Stuart Mill to the contrary; but an industry of sufficient extent and variety to furnish employment to a large population cannot be based upon a demand for luxuries alone. There is at least that much truth in the socialist contention that industrial depression is due to underconsumption.

There can be no doubt that in all the great countries now at war a few individuals are, during the war, reaping enormous profits, despite the heavy general taxes and the special taxes on the profits

of munitions manufacture. The great mass of the people, however, cannot escape impoverishment. While their property may not be destroyed and while business may be only for the time being impaired, the appalling burden of taxes, the proceeds of which must largely go to pay interest on war debts, will fall upon all. The distribution of ownership of the war bonds will prove an important influence in the distribution of net income—for whoever gets the proceeds of the taxes which are levied to pay interest on war debt will have funds to spend, either for immediate-consumption goods and services or for investment in capital goods. We are not in position to know how widely the bonds have been purchased by persons of comparatively small means and how much their ownership will prove to be concentrated in the hands of the wealthy. If ownership is centralized, as it will probably prove to be, interest on war debt will go, to considerable extent, to increase expenditure for luxuries. There will be a greatly increased demand, not only for material luxuries, but for service; we may look for increased ostentation and for the entrance of many people, both men and women, hitherto of the mechanics and artisan class, into the ranks of the servant class.

It is possible, perhaps even probable, however, that the temper of the times will not be favorable to ostentatious luxury—that neither governments nor masses will “stand for it” and that some way will be found to compel the wealthy recipients of interest upon war debt to invest a large part of their income in industrial enterprises. This they may be inclined to do, even without pressure, for the interest rate will inevitably be high and attractive. Moreover, the greater the concentration of wealth the more the surplus over what is necessary to satisfy present wants—even luxurious wants—and the greater probability, therefore, of saving and investment. From this point of view industrial recovery would be more rapid under a centralization of wealth, however detrimental socially such concentration might be, than it would be where wealth is widely dispersed and income consequently not so much above immediate needs. But, on the other hand, concentration of income robs the people at large of purchasing power and thus removes the

fundamental motive to business enterprise—the discernment, on the part of the business men, of a market for their finished products.

Turning to foreign demand for consumers' goods, we find it on a surer footing. The world outside of Europe, especially the United States, will have enormous buying power and, in the absence of high-tariff barriers, will be a good place in which to sell. The flow of gold to us during the war and the indebtedness of the Allies to us will make this a country of continued high prices. The foreign demand for German manufactures will reach impressive dimensions, and the foreign call for French silks, cottons, wines, and novelties will be greater than ever. The rich peoples of the earth will be good customers of those who now are buying of us at the desperate prices of war time. So far as this foreign demand is concerned, the two questions are whether the nations now at war can recover their capital equipment and financial organization quickly enough to take advantage of it before they go through a long period of depression, and whether foreign nations will erect tariff walls to "protect" themselves from cheap goods.

As to the demand for consumers' goods, then, no very definite conclusion can be drawn, but the most promising and effective initial demand will, in the absence of specially high tariffs, undoubtedly come from the nations not exhausted by the war. The extent and intensity of internal demand will be enormously reduced in any case, and still more so if concentrated ownership of war bonds robs the people of purchasing power through high taxes, the proceeds of which go chiefly to the rich, who will spend them either in futile luxuries or in investment which, in the face of lack of purchasing power on the part of the masses, can only gradually rehabilitate industry.

Assuming, however, that consumers' demand will be effective as an immediate spur to industrial enterprise, can Europe get the necessary money or credit with which to rehabilitate her industries at once?

In the first place, let us ask, how great will be the need of new money capital and new capital equipment? How great is the loss from actual destruction of productive wealth in Europe? The

amount of such destruction is enormous and it is an important consideration, but, incalculable as such destruction is, and will be, upon the various battle areas, it would be easy to overestimate it. Germany, thus far, has suffered practically no loss of this kind, nor have Italy and England except for the destruction to shipping. The Russian invasion of East Prussia touched only an agricultural region. Russia's sacrifice has been far more in area of territory than in importance of the industrial centers destroyed or lost. Neither Servia nor Roumania was a manufacturing nation of importance. The German drives have occasioned vast suffering and destruction of life and wealth, but probably the loss of a comparatively small amount of industrial capital. Only in Belgium and France is the destruction of industrial wealth and the dislocation of industry upon a scale to produce disquietude concerning recuperative capacity. The destruction of a few hundred châteaux is economically an unimportant matter. It is the destruction of real capital that counts, and the extent of such destruction depends upon the breadth of the area of actual fighting, the intensity and concentration of shell fire in dense industrial communities, the duration of the war, and the character of the struggle from now on. Should the evenly balanced forces result in a virtual stalemate, until one side or the other is worn out and asks for peace, the additional destruction of capital incident to the actual fighting will not be great; but if the months to come are to witness in France or in Germany great drives over wide areas, and if the submarine blockade is as destructively effective as the Germans assert that it is, then the destruction of industrial equipment cannot fail to be appalling.

Actual destruction of industrial plants is not the only loss occasioned by war. Countless factories have been adapted, at greater or less cost, to the manufacture of munitions. These plants can probably be readapted to the pursuits of peace, however, without comparatively great cost. Such is the adaptability of modern industrial technique. Nevertheless, the cost of the changes must in the aggregate be enormous. Doubtless many factories constructed especially for the manufacture of munitions, e.g., explosives, may be practically a dead loss in times of peace.

How great will be this industrial loss attendant upon the adaptation and readaptation of plants to the exigencies of the moment cannot be stated, but it must be added to the loss from actual destruction. In any case the total loss through destruction and through adaptation to munition manufacture will prove great enough to put an extremely serious strain upon investment funds already depleted by the demands of war.

Turning to the supply side of capital, where will investment funds be found? Germany may prove to be at considerable advantage in that she has financed her own war and kept her supply of gold at home, but if, as seems to be the case, she has done so by pyramiding credit, her house of cards may bring on a financial panic and a period of acute depression which will have a prolonged and disastrous effect upon her industries and upon the lot of her laboring population. In the case of the Allies the millions of specie exported and the immense interest charges to be met abroad will leave the people, rich as well as poor, with comparatively small funds for industrial investment.

In general, then, capital funds after the war will have to be obtained (a) from interest proceeds of war debt floated at home, (b) from those persons who have accumulated wealth during the war and have not invested surplus income in war bonds, (c) from foreign investors. The first source, as we have seen, will depend upon the distribution of the war bonds and the temper of their owners. The second does not seem particularly promising, though many fortunes have thus been made. The last source will probably not be available for a considerable time after peace is concluded, at least not until financial conditions become stable enough for the high interest rate to prove an irresistible attraction to foreign investors. On the whole, the outlook for a plentiful supply of funds for the immediate building up of new productive plants does not look bright, although it is quite possible that it will prove equal to a sluggish demand.

The reasonable general conclusion with regard to the demand and supply of capital seems to be that neither will show great strength. The process of upbuilding industry to normal conditions will be slow and will not result in that sudden rebound in energy

which normally takes place after war. Consequently demand for labor at a time when demand is most essential to economic and social health will not be vigorous.

Should supply of labor remain constant, the decreased demand would involve a condition in which the working classes would have to undergo a long period of depression—low wages, unemployment, and lack of medical and hygienic care which go with insufficient family incomes. These are the conditions under which, experience shows, marriage- and birth-rates tend to decline, and we should in that case be led not to expect the normal post-bellum vital recovery.

The one condition, apparently, that can save the laboring classes from acute suffering is the fact that millions of workers will be resting beneath the earth. While, on the one hand, demand for consumers' goods will be relatively low, capital hard to get, and consequently the total demand for labor relatively low, the supply of labor, on the other hand, will also be different from what it was before the war. Just how it will differ in amount is not easily said. Millions of men will have been killed, and other millions, wholly or partly incapacitated, will be a burden upon those who are able to work. The problematical element in the labor supply will be the women. Temporarily, at least, the war has recovered the industrial capacity of women. Whether to social advantage or not, in the long run, women have shown that they can do "men's work" and do it well. Will they go docilely back to domesticity and dependence? Vast numbers will, where the home is not broken up, and where their wages are not absolutely necessary for family subsistence. Many will not, however, because there will be no home to go to; and still others, having once tasted the sweet wine of economic freedom, will refuse to go back to the old mode of living. It is just possible that government will bring pressure to bear to get them out of the factories and put men in their places, and it is not unlikely that public—that is male—sentiment everywhere will raise a hue and cry for the women to give back to the war-worn defenders of their country the jobs that were formerly theirs. But, in the aggregate, there will be a large addition to the supply of wage-workers—not only because many women will have nothing else to do, and because many will want to remain in the factories anyhow,

but because they will all, in the absence of legal limitation, work for lower wages than men. Here again it is not at present possible to arrive at any estimate of the labor supply after the war. The value of the variables is unknown. One can only hazard the opinion that the larger entrance of women into industry and the economic pressure, on all who can, to earn an income will do much to counter-balance the loss of men by the wastage of war, especially when we take into account the probable decrease in the demand for labor (compared to war and pre-war times) due to lack of purchasing power and difficulty of securing capital funds for the rehabilitation of industrial plants.

So far as we are warranted in drawing even any tentative conclusions as to economic conditions immediately after the war, it thus seems that demand for labor will be slack, competition for work keen, unemployment general, prices of necessities high, and wages low. For years the condition of the masses will be one of extreme poverty. In so far as the marriage- and birth-rates are correlated with economic conditions, there is little to cause expectation that the normal rebound in marriages and births will occur.

Turning to the psychological factor, will the people be so depressed that they will take no heart in rehabilitation? Or will the soldiers return to industrial and civil pursuits in the temper of the young German officer who said to an American friend, "There will be more room and more opportunity for the survivors after this war. War is once in awhile necessary to thin out the population!" The example of the French after the humiliating result of 1870 suggests that a nation may recover with astonishing vigor and rapidity even in dire defeat. But the losses of the Franco-Prussian War were small compared to those of the present. Moreover, the agony was not long drawn out. Can we draw any inference from our Civil War? The South was backward and easy-going. It was a purely agricultural country. Slavery was a factor of prime import. Reconstruction was in some ways as depressing as war. There is consequently scarcely a parallel with the situation in France in 1872. The South, returning with resignation to what little was left after war and Reconstruction, settled down to stagnation for a quarter of a century. While there was

ultimately a strong recovery in the birth-rate in the South, we have seen reason to believe that it was delayed some years after the close of the war. A new generation, in fact, had to grow up—and even a third generation—and capital venture in from the North before the South began to have any great economic momentum. Servia, Roumania, Turkey, and Southeastern Europe in general are more as our South was after the Civil War—agricultural, backward, non-industrial. As for the Germans, their government is accustomed to order the life of the people for collective ends. We may count upon it to do everything in its power to set the nation's productive powers to work when the war is over. But whether the German people can stand defeat and return stolidly to work—if work is offered—remains to be seen. And it may be that victory, to whichever side it falls, will have been so dearly bought as to leave all classes deadened and disheartened, as was the South in 1865. It is necessary to remember that this is the first war on anything like so great a scale, and the first great war between modern industrial nations—the first war since productive methods took on their full modern complexity and capital became necessary in such large amounts—for Germany in 1870 had hardly begun to enter upon her period of industrial evolution. As the size and complexity of the organism disturbed are greater, the results will be correspondingly more lastingly disastrous.

So much rebuilding, material, social, and moral, will have to be done, however, so great will be the relief in mind and body when peace comes, and so thoroughly industrialized are the habits and thoughts of the people of Western Europe, that it is not improbable that psychological depression—apart from possible industrial stagnation—will not be widespread, lasting, or acute. This is the more likely because the women will have brought a new moral force into work—the moral power which comes from earning one's own living—which will tend to counterbalance the industrial demoralization of men accustomed to trench life and thereby weaned away from the steady and unexciting routine of industrial labor.

Now in view of these many conflicting and complex economic and psychic conditions, what can be ventured as to the probable trend of marriage- and birth-rates? First as to the marriage-rate.

If the rebound of industry should come quickly, giving a reasonably strong demand for labor, this being the only factor, the normal rise in the marriage-rate would take place at once. But labor demand is not the only factor. It is possible that the new economic lot of the women may render them less ready to marry than they would have been under the old conditions. Doubtless both church and state will thunder forth anathemas against those who are tardy in entering the matrimonial bond; doubtless lovers long separated by war and conscription may rush to each other's arms; but sober second thought, stimulated in the woman by economic independence, in the man by lack or insecurity of employment, and in both by the mighty shock of world-conflict and continent-wide slaughter, will give pause. And that pause may well prove fatal to the rise of the marriage-rate.

How will it stand with the birth-rate? Experience shows that war has an especially noticeable disturbing influence upon the number of illegitimate births. Thus we have in France:<sup>1</sup>

NO. OF LIVING ILLEGITIMATE BIRTHS (IN THOUSANDS)

1869.....	71	1873.....	71
1870.....	70	1874.....	69
1871.....	59	1875.....	67
1872.....	70		

For Germany, the numbers in thousands were:<sup>2</sup>

1868.....	168.6	1872.....	150.6
1869.....	163.3	1873.....	158.3
1870.....	165.4	1874.....	152.1
1871.....	144.4	1875.....	155.6

The illegitimate birth-rate will rise somewhat after the war, but the legitimate and the total rates will not be likely to manifest the usual normal post-bellum rebound. On the part of the married, economic conditions, in the first place, will produce prudence. If the marriage-rate fails to make the normal rebound because economic and psychic conditions are unfavorable to marriage, this in itself, other things being equal, will of course tend to keep down the

<sup>1</sup> *Annuaire Statistique de la France*, XXXIII (1913), 11.

<sup>2</sup> *Statistisches Jahrbuch für das deutsche Reich*, 1903, p. 25.

birth-rate. Even should the marriage-rate recover its normal level, however, a strong tendency to birth control may be expected, which will be an additional factor retarding the rebound in the birth-rate. Church and state may use their influence against the spread of contraceptives, but it will not be effective. It is necessary to remember that the Continent has not taken a stand against the spread of contraceptive knowledge such as graces our American legal policy.

A third factor which will militate against both marriage- and birth-rates will be the altered sex-constitution, and to a lesser degree the altered age-constitution of the population. No such demographic changes have occurred since modern vital statistics began as will be revealed when the results of the present war are known. The great excess of females can have but one result—a low marriage-rate and a low legitimate birth-rate.

Militarism, nationalism—neo-cameralism and neo-mercantilism—thrive on great populations and in turn strive to stimulate that increase. Militarist and nationalist regard the “state” as an end in itself, and the people are merely means to this end. Some will call it a great end, others will call it a great illusion; but, so long as the military man is in control and so long as he can appeal to crass nationalism and chauvinism, the people will continue to be regarded as a sort of cattle. Continental officialdom outside of France has not moved, after all, very far away from Frederick the Great’s view, which he expressed in a letter to Voltaire in 1741, that men are “simply a herd of deer in the park of a great noble, which has no other function than to people and fill the enclosure.”<sup>1</sup> Cameralists and mercantilists will, no doubt, continue their patriotic demand for an undiminished birth-rate, but among the thinking people the demand will fall on deaf ears than ever before. What woman with real sense of moral responsibility, it will be asked, can consent to bear and rear children to be fed into the insatiable armies of some future senseless war? What man who has been through the hell of these war years will not pause before he wishes to be the father of boys who must in their turn, in all likelihood, go through what he has gone through, and worse?

<sup>1</sup> Stangeland, *Pre-Malthusian Doctrines of Population*, p. 131.

Is it too much to hope that some such thoughts will come to the thinking middle classes? But from the masses of stolid and unthinking peasantry what are we to hope? Will their thoughtlessness, their brutality, have been reduced by war? Hardly, unless—and here is the deciding factor—unless the women who have tasted economic freedom and who at the same time have seen the male population, the fruit of their wombs, decimated shall have gained a new vision and a determination to be something more than passive mothers, accepting whatever fate authority may impose upon them and their children. If the women have, perchance, in the great shock of conflict, of work, of suffering, come to a glimmer of the light of real ethical responsibility, their moral force may join with their self-interest, and the fertility rate be kept down.

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